CLAIMS

1. Method for producing a superconducting inductive component having at least two plots, this component comprising at least one line segment incorporating at least one plot of the component, this line segment constituting a conducting or superconducting layer within a stack (E) of alternately superconducting (Cl) and insulating (C2) films.

2. Method according to claim 1, characterized in that each film constituting the stack (E) is perfectly crystallized.

3. Method according to one of claims 1 or 2, characterized in that it comprises a prior step of depositing an insulating film (C2) on a substrate (S).

4. Method according to one of claims 1 or 2, characterized in that it comprises a prior step of depositing a superconducting film (Cl) on a substrate (S).

5. Method according to one of claims 1 or 2, characterized in that it comprises a prior step of depositing a superconducting film (L1) on a substrate (S) followed by the depositing of the stack (E).

6. Method according to one of claims 3 or 4, characterized in that it comprises moreover the following steps:
- a deposit of the stack (E) of alternately superconducting (Cl) and insulating (C2) films,
- an etching of the stack (E) carried out in such a way that the latter only remains at the locations where an inductive component is to be implanted.

7. Method according to claim 5, characterized in that it comprises moreover the following steps:

- an etching of the stack (E) carried out in such a way that the latter only remains at the locations where an inductive component is to be implanted.

- an etching of the superconducting film (L1).

8. Method according to claim 5, characterized in that it comprises moreover the following steps:

- a simultaneous etching of the stack (E) and of the superconducting film (L1)

- an etching of the stack (E) carried out in such a way that the latter only remains at the locations where an inductive component is to be implanted.

9. Method according to one of the preceding claims, characterized in that at least one of the superconducting films (Cl) is produced from $YB_{a2}Cu_30_{7-\delta}$ compounds.

10. Method according to one of the preceding claims, characterized in that at least one of the insulating films (C2) is made from $LaA10_3$ compounds.

11. System for producing a superconducting inductive component having at least two plots, this component comprising at least one line segment incorporating at least one plot of the component, this line segment constituting a conducting or superconducting layer within a stack (E) of alternately superconducting (Cl) and insulating (C2) films, implementing the method according to one of the preceding claims.

12. System according to claim 11, characterized in that it comprises:

- means for depositing a stack (E) of alternately superconducting and insulating films, and
- means for etching all of the deposited films, these means being arranged in such a way that said deposited films remain only at the locations where an inductive component is to be implanted.

13. System according to claim 11, characterized in that it comprises:

- means for depositing a superconducting film (LI) on a substrate (S),
- means for depositing on the superconducting film (L1) a stack (E) of alternately superconducting and insulating films, and
- means for etching all of the deposited films, these means being arranged in such a way that the film (L1) remains only at the locations where a superconducting line is to be implanted and the stack (E) remains only at the locations where an inductive component is to be implanted.

14. Antenna device comprising an electronic circuit including a superconducting inductive component produced by the method according to one of claims 1 to 10.

15. Antenna device according to claim 14, characterized in that the antenna is produced from a superconducting thin film.

16. Delay line device comprising an inductive component in serie and a capacitive component in parallel downstream of said inductive component, characterized in that the inductive component is a superconducting inductive component produced by the method according to one of claims 1 to 10.

17. Phase shift radar device comprising a plurality of antennas each comprising an electronic circuit including a delay line according to claim 16, this delay line being arranged such that each of said antennas transmits a signal whose phase is shifted with respect to that of the near antennas.

18. Electronic frequency filtering device comprising an electronic circuit including a superconducting inductive component produced by the method according to one of claims 1 to 10.

19. High-pass filter device comprising an inductive component in parallel and a capacitive component in serie downstream of said inductive component, characterized in that the inductive component is a superconducting inductive component produced by the method according to one of claims 1 to 10.

20. Low-pass filter device comprising a capacitive component in parallel and an inductive component in serie downstream of said capacitive component, characterized in that the inductive component is a superconducting inductive component produced by the method according to one of claims 1 to 10.